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Johnson et al.

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(54) **BACK-OFF RETRY WITH PRIORITY ROUTING**

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710/48; 710/58

(58) **Field of Classification Search**
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See application file for complete search history.

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(57) **ABSTRACT**

A method for back-off retry with priority routing in a single, cohesive SAS expander includes routing a data transfer between an input of a single, cohesive SAS expander and an output of the single, cohesive SAS expander, wherein the single, cohesive expander includes a first SAS expander, and at least one additional SAS expander via at least one inter-expander link (IEL). The routing of data may further include routing a first OPEN request on a direct path through the first SAS expander to a port of a device and routing a second OPEN request on an alternate path from the first SAS expander and through a second SAS expander to the port of the device. The method further includes determining link availability between the second SAS expander and the port of the device, and, upon determination of a failed link or a busy link, re-routing the data transfer from the second SAS expander to the first SAS expander or a third SAS expander, or retrying the data transfer through the second SAS expander.

21 Claims, 18 Drawing Sheets

